

WHAT IS CLAIMED IS:

1. An image display system constructed in such a way that a first image having a first state of polarization and a second image having a second state of polarization are projected with one image superimposed on another, wherein said first image is entirely white.

2. The system of claim 1 wherein said first image is circularly polarized with clockwise rotation and said second image is circularly polarized with counterclockwise rotation, or vice versa.

3. The system of claim 1 wherein said first image is linearly polarized in a specific direction and said second image is linearly polarized in a direction intersecting the plane of polarization of said first image at right angles.

4. An image display system constructed in such a way that a first image having a first state of polarization and a second image having a second state of polarization are projected with one image superimposed on another, wherein said second image contains specific information to be displayed and said first image forms a white pattern to cover a specific part of or the whole of said second image.

5. The system of claim 4 wherein said first image is circularly polarized with clockwise rotation and said second image is circularly polarized with counterclockwise rotation, or vice versa.

6. The system of claim 4 wherein said first image is linearly polarized in a specific direction and said second image is

linearly polarized in a direction intersecting the plane of polarization of said first image at right angles.

7. An image display system constructed in such a way that a first image having a first state of polarization and a second image sequentially generated to fit in successive time frames in accordance with a time-division display scheme and having a second state of polarization are projected with one image superimposed on another, wherein said second image contains specific information to be displayed and said first image forms a white pattern to cover a specific part of or the whole of said second image.

8. The system of claim 7 wherein said first image is circularly polarized with clockwise rotation and said second image is circularly polarized with counterclockwise rotation, or vice versa.

9. The system of claim 7 wherein said first image is linearly polarized in a specific direction and said second image is linearly polarized in a direction intersecting the plane of polarization of said first image at right angles.

10. The system of claim 7 wherein said second image projected in successive time frames includes a plurality of different pictures.

11. The system of claim 7 wherein said second image is a three-dimensional image.

12. The system of claim 7 wherein said first and second images are circularly polarized in opposite rotating

directions, and their rotating directions are alternately reversed in successive time frames under the time-division display scheme.

13. A method for providing on-screen visual display, in which a first image having a first state of polarization and a second image having a second state of polarization are projected with one image superimposed on another, said first image being entirely white, wherein a viewer looking through an optical filter which selectively allows light of said second state of polarization to pass through can see said second image.

14. A method for providing on-screen visual display, in which a first image having a first state of polarization and a second image having a second state of polarization are projected with one image superimposed on another, said first image forming a white pattern just to cover such part of said second image that should be hidden from view of unspecified viewers, wherein a viewer looking through an optical filter which selectively allows light of said second state of polarization to pass through can see said second image.

15. The method of claim 14 wherein said second image is sequentially generated to fit in successive time frames in accordance with a time-division display scheme, and the state of polarization of said first image varies in each successive time frame under the time-division display scheme.

16. An image display system for projecting a plurality of images on a screen with one image superimposed on another comprising:

a first liquid crystal projector for alternately projecting mutually differing first and second images having a first state of polarization in successive time frames in accordance with a time-division display scheme;

a second liquid crystal projector for projecting a white image having a second state of polarization which differs from said first state of polarization;

a first viewing device assigned to a first viewer incorporating a first liquid crystal shutter which opens and closes in synchronism with time-division display operation of said first liquid crystal projector to selectively allow said first image to pass through and a first optical filter which allows the image having said first state of polarization to pass through; and

a second viewing device assigned to a second viewer incorporating a second liquid crystal shutter which opens and closes in synchronism with the time-division display operation of said first liquid crystal projector to selectively allow said second image to pass through and a second optical filter which allows the image having said first state of polarization to pass through,

whereby said first viewer wearing said first viewing device can selectively see said first image and said second viewer wearing said second viewing device can selectively see said second image, while viewers not wearing such a viewing device can only see said white image.

17. The system of claim 16 further comprising:

a first polarizing plate provided in front of said first liquid crystal projector;

a first quarter-wave plate provided in front of said first polarizing plate;

a second polarizing plate provided in front of said second liquid crystal projector;

a second quarter-wave plate provided in front of said second polarizing plate; and

a controller connected between said first liquid crystal projector and said first and second liquid crystal shutters to cause said first and second liquid crystal shutters to alternately open and close in synchronism with the time-division display operation of said first liquid crystal projector.

18. The system of claim 16 wherein said first and second liquid crystal projectors focus the images on one side of said screen and the viewers see the images from the other side of said screen.

19. An image display system for projecting a plurality of images on a screen with one image superimposed on another comprising:

a first liquid crystal projector for alternately projecting images for right and left eyes in successive time frames in accordance with a time-division display scheme, said images having a first state of polarization;

a second liquid crystal projector for projecting a white image having a second state of polarization which differs from said first state of polarization; and

a viewing device assigned to a viewer incorporating a first liquid crystal shutter which, provided at the right-eye side of said viewing device, opens and closes in synchronism with time-division display operation of said first liquid crystal projector to selectively allow said image for the right eye to pass through, a second liquid crystal shutter

which, provided at the left-eye side of said viewing device, opens and closes in synchronism with the time-division display operation of said first liquid crystal projector to selectively allow said image for the left eye to pass through, a first optical filter which, provided at the right-eye side of said viewing device, allows the image having said first state of polarization to pass through, and a second optical filter which, provided at the left-eye side of said viewing device, allows the image having said first state of polarization to pass through,

whereby said viewer wearing said viewing device can selectively see a three-dimensional image, while viewers not wearing such a viewing device can only see said white image.

20. The system of claim 19 further comprising:

a first polarizing plate provided in front of said first liquid crystal projector;

a first quarter-wave plate provided in front of said first polarizing plate;

a second polarizing plate provided in front of said second liquid crystal projector;

a second quarter-wave plate provided in front of said second polarizing plate; and

a controller connected between said first liquid crystal projector and said first and second liquid crystal shutters to cause said first and second liquid crystal shutters to alternately open and close in synchronism with the time-division display operation of said first liquid crystal projector.

21. The system of claim 19 wherein said first and second liquid crystal projectors focus the images on one side of said

screen and the viewer sees the images from the other side of said screen.

22. An image display system comprising:

a liquid crystal panel including a plurality of active matrix regions and common peripheral circuits for controlling horizontal and/or vertical scanning operation in said active matrix regions, said active matrix regions and said peripheral circuits being formed on a single substrate;

a polarizer for giving a first state of polarization to at least one of images generated by said active matrix regions;

a polarizer for giving a second state of polarization to an image other than the image(s) to which said first state of polarization is given; and

a projector for projecting the images generated in said active matrix regions of said liquid crystal panel on a screen with one image superimposed on another;

wherein at least one of the images generated by said active matrix regions is entirely white.

23. The system of claim 22 wherein said first and second states of polarization are circular polarization with opposite rotating directions.

24. The system of claim 22 wherein the images given said first and second states of polarization are linear polarization with their planes of polarization intersecting at right angles with each other.

25. An image display system comprising:

a liquid crystal panel including a plurality of active

matrix regions and common peripheral circuits for controlling horizontal and/or vertical scanning operation in said active matrix regions, said active matrix regions and said peripheral circuits being formed on a single substrate;

a polarizer for giving a first state of polarization to at least one of images generated by said active matrix regions;

a polarizer for giving a second state of polarization to an image other than the image(s) to which said first state of polarization is given; and

a projector for projecting the images generated in said active matrix regions of said liquid crystal panel on a screen with one image superimposed on another,

wherein at least one of the images generated by said active matrix regions forms a white pattern just to cover such part of the other image(s) that should be hidden from view.

26. The system of claim 25 wherein said first and second states of polarization are circular polarization with opposite rotating directions.

27. The system of claim 25 wherein the images given said first and second states of polarization are linear polarization with their planes of polarization intersecting at right angles with each other.